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EX PARTE

October 15, 1996

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W. Room 222
Washington, D.C. 20554

RE: In the Matter of Federal-State Joint Board on Universal Service
CC Docket No. 96-45

Dear Mr. Caton:

The attached Demand Elasticity Data was provided to Jim Casserly of Commissioner Ness' office in connection with the above referenced docket.

Sprint requests that this information be made a part of the record in this matter. Two copies of this letter, in accordance with Section 1.1206(a)(1), are provided for this purpose. If you have any questions, please feel free to call.

Sincerely,

Jay C. Keithley

Attachment

cc: Jim Casserly

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Household Telephony: Expenditure, Usage & Elasticity

Estimated Elasticities: Measurements of the responsiveness of demand to changes in the price of each service or feature.

- Basic access to the network: .03-.05¹
- IntraLATA toll: .40-.50²
- InterLATA toll: .72-.80³
- Call Waiting: .52⁴
- Call Forward: 1.39
- Caller ID: 1.33
- Auto Call Return: .49

¹ Lester Taylor, *Telecommunications Demand in Theory & Practice*, Kluwer Academic Press, 1994.

² Ken Train, *Estimating IntraLATA Toll Elasticity*, Telecommunications Policy, 1993.

³ Taken from an AT&T study prepared by Gatto, Langin-Hooper, Robinson & Tyon, presented to the FCC, cited in Taylor 1994.

⁴ All calling feature elasticities estimated by the economic research firm PNR & Associates, Inc., Philadelphia, Pennsylvania, 1994.

Elasticity, Rate Rebalancing & Pricing:

- “If price mark-ups are needed, economic efficiency is maximized if the mark-up is inversely proportional to the elasticities of demand for the several services involved.”⁵
- “The less elastic the demand for a service, the larger the mark-up it will accept while minimizing the consequent discouragement of consumption.”⁶
- Efficiency requires that “revenue deficiencies be made up primarily in the flat charge for access [to a network], not for usage. The same is true of any deficiencies created by a decision to subsidize some customers in order to keep them from dropping service.”⁷

⁵ Baumol & Bradford, *Optimal Departures from Marginal Cost Pricing*, American Economic Review 1970.

⁶ Kahn & Shew, *Current Issues in Telecommunications Regulation: Pricing*, Yale Journal on Regulation, 1987.

⁷ Kahn & Shew

• Overall Expenditure by Household⁸

<u>HH Income Group</u>	<u>% of HH</u>	<u>Average Total Bill</u>
Under 10K Annually	11.1	\$45.40
\$10K-\$19,999	18.9	\$48.70
\$20K-\$29,999	18.8	\$52.10
\$30K-\$39,999	15.3	\$52.70
\$40K-\$49,999	10.8	\$51.90
\$50K-\$74,999	19.1	\$59.60
\$75K-\$99,999	3.7	\$63.11
\$100K and Over	2.3	\$70.51

⁸ Combined expenditure on local and long distance calling. This figure does not include cellular or any other wireless communication. Figures obtained from *Bill Harvesting II Database*, created and compiled by PNR & Associates, Inc., 1995.

Expenditure on Local Phone Bill⁹

<u>HH Income Group</u>	<u>% of HH</u>	<u>Average LEC Bill</u>
Under 10K Annually	11.1	\$29.21
\$10K-\$19,999	18.9	\$29.56
\$20K-\$29,999	18.8	\$30.12
\$30K-\$39,999	15.3	\$31.01
\$40K-\$49,999	10.8	\$31.78
\$50K-\$74,999	19.1	\$32.79
\$75K-\$99,999	3.7	\$35.60
\$100K and Over	2.3	\$41.73

- It is important to note that nationwide, the average rate for basic service is approximately \$19-\$20 monthly.
- The figures above reveal that even low income households, on average, are spending additional discretionary income on telephony services.

⁹ These figures include intraLATA toll, vertical features, possible payments on customer premise equipment (if billed on a monthly basis), anything that appears on the end-user's bill for which payment is made to the local telephone company.

Expenditure on Long Distance Bill¹⁰

<u>HH Income Group</u>	<u>% of HH</u>	<u>Average LD Bill</u>
Under 10K Annually	11.1	\$16.17
\$10K-\$19,999	18.9	\$19.11
\$20K-\$29,999	18.8	\$21.94
\$30K-\$39,999	15.3	\$21.73
\$40K-\$49,999	10.8	\$20.09
\$50K-\$74,999	19.1	\$26.80
\$75K-\$99,999	3.7	\$27.51
\$100K and Over	2.3	\$28.78

¹⁰ These expenditure figures represent the total amount paid to the long distance company by the end-user, taking into account any optional calling plans, etc. to which the customer might subscribe.

Expenditure on LEC Toll

<u>HH Income Group</u>	<u>% w/LEC Toll</u>	<u>Avg. Expenditure</u>
Under 10K Annually	52%	\$8.16
\$10K-\$19,999	58%	\$8.59
\$20K-\$29,999	63%	\$8.05
\$30K-\$39,999	68%	\$8.63
\$40K-\$49,999	65%	\$8.78
\$50K-\$74,999	68%	\$8.87
\$75K-\$99,999	67%	\$11.57
\$100K and Over	73%	\$13.99

- On this page it is worth noting that, as expected, the percentage of HH with any LEC toll increases as HH income increases.
- However, the *average amount* spent on LEC toll is extremely consistent across most income groups: Over ½ of low income households expend roughly the same amount of discretionary income on LEC toll calling as households earning \$75K annually!

Penetration of Vertical Features¹¹

<u>HH Income Group</u>	<u>% w/Any Vertical Features</u>
Under 10K Annually	34.3%
\$10K-\$19,999	32.8%
\$20K-\$29,999	39.6%
\$30K-\$39,999	46.2%
\$40K-\$49,999	47.3%
\$50K-\$74,999	48.9%
\$75K-\$99,999	51.6%
\$100K and Over	52.7%

- As expected, the probability of a having vertical features increases with income. However, it is worth noting that income is clearly not a *major* determinant since a tenfold increase in income only raises the probability from 34.3% to 52.7%.

¹¹ These figures were taken from the ReQuest III Database compiled by PNR & Associates, Inc.. They were verified using the Yankee Group of Boston's 1995 TAF (Technologically Advanced Family) Residential Survey. A household was included if it had any vertical feature (CCF, CLASS, etc.) and the household was only counted once, regardless of whether they had 10 features or only a single feature such as Call Waiting.

Expenditure on Cable Television¹²

<u>HH Income Group</u>	<u>% w/CATV</u>	<u>Avg. Expenditure</u>
Under 10K Annually	61.76%	\$30.22
\$10K-\$19,999	65.14%	\$30.04
\$20K-\$29,999	69.25%	\$31.09
\$30K-\$39,999	73.45%	\$31.69
\$40K-\$49,999	75.47%	\$32.12
\$50K-\$74,999	81.18%	\$34.16
\$75K-\$99,999	85.20%	\$33.41
\$100K and Over	93.60%	\$42.92

- The figures represent only the subset of the population where cable was available. For example, Row 1 indicates that where access to CATV is available, 61.7% of HH earning less than \$10K a year subscribe to some form of cable, and spend an average of \$30 monthly.

¹² Taken from *Bill Harvesting II*. These figures include any amount spent on premium channels (HBO, etc.,) but do not include any expenditure for pay-per-view movies, sporting events, concerts, etc..

Income Group as % of Non-connected Population¹³

<u>HH Income Group</u>	<u>% of Pop.</u>	<u>% of Non-Connected</u>
Under 10K Annually	11.1	33.80
\$10K-\$19,999	18.9	27.90
\$20K-\$29,999	18.8	12.90
\$30K-\$39,999	15.3	7.80
\$40K-\$49,999	10.8	6.40
\$50K-\$74,999	19.1	6.60
\$75K-\$99,999	3.7	3.10
\$100K and Over	2.3	1.00

- As the table shows, low income households make up 11.1% of the population but account for 33.8% of the households *not* connected to the telephone network (either by choice or for other reasons)
- However, it is important to note that income is clearly not the only factor involved since over 10% of those HH not connected are earning over \$50K annually.

¹³ Figures taken from *ReQuest III Database*, PNR & Associates, Inc..

Notes on the Data Sources Used:

- *Bill Harvesting II* is a database compiled by PNR & Associates, Inc., an economic research firm based in Philadelphia, Pennsylvania. This database includes 10,000 observations of actual expenditure on telecom (and other) services.¹⁴ All respondents were residential customers (no business) and all expenditure figures are monthly. The sample is statistically projectable, representative, appropriately weighted and proportioned so that all results are statistically and econometrically valid.
- *ReQuest III* is a separate database, also from PNR & Associates, made up of over 30,000 observations (again residential) addressing slightly different issues such as purchasing and usage habits, perspectives on quality and value of service, etc.. This sample is also statistically valid, representative and projectable.
- Both sets of data were gathered in 1995.

¹⁴ Respondents sent in their actual bills to be tabulated.